

Amendments to the Claims

Claims 1-5 (**Canceled**)

Claim 6 (**Currently Amended**) An information recording apparatus for encoding video information and audio information to a system stream and recording the system stream to a recording medium,

- the system stream being allowed to have a first format (TS) and a second format (PS),
- the information recording apparatus comprising:

- a first encoding section operable to encode video information and audio information in a predetermined encoding manner according to the first format (TS) to generate a video elementary stream and an audio elementary stream;

- a second encoding section operable to perform system-encoding by multiplexing the video elementary stream and the audio elementary stream to generate the system stream according to the first format (TS); and

- a control section operable to control the first encoding section and the second encoding section, wherein

- the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format (TS) to the second format (PS),

- the control section controls the first and second encoding sections so that each encoding is done according to the constrained format,

- the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segmented in packs, and the pack is larger than the first packet in size,

- the first packet stores segmented data of a second packet,

- the second packet stores video information or audio information, the second packet storing the audio information including at least one audio frame, and

- according to the constrained format,

- a predetermined number of first packets including either the video information or the audio information are grouped and managed as a multiplexing unit, and a total payload data

size of first packets managed in the multiplexing unit is smaller than a payload data size of the pack,

the multiplexing unit is a processing unit to convert the first format (TS) to the second format (PS), and

a first one of complete audio frames in the multiplexing unit including only the audio information is a first one of audio frames in a payload of the second packet, wherein the first format is MPEG-TS, the second format is MPEG-PS and the second packet is a PES packet.

Claims 7-10 (Canceled)

Claim 11 (Currently Amended) An information recording method including encoding video information and audio information to a system stream and recording the system stream to a recording medium,

the system stream being allowed to have a first format (TS) and a second format (PS),

the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format (TS) to the second format (PS),

the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segmented in packs, and the pack is larger than the first packet in size, and

the first packet stores segmented data of a second packet, and the second packet stores video information or audio information, the second packet storing the audio information including at least one audio frame,

the information recording method comprising:

encoding video information and audio information in a predetermined encoding method according to the constrained format (TS) to generate a video elementary stream and an audio elementary stream;

performing system-encoding by multiplexing the video elementary stream and the audio elementary stream according to the constrained format (TS) to generate the system stream; and

grouping and managing a predetermined number of first packets including either the video information or the audio information as a multiplexing unit, wherein

a total payload data size of first packets managed in the multiplexing unit is smaller than a payload data size of the pack, the multiplexing unit being a processing unit to convert the first format (TS) to the second format (PS), and

a first one of complete audio frames in the multiplexing unit including only the audio information is a first one of audio frames in a payload of the second packet, wherein the first format is MPEG-TS, the second format is MPEG-PS and the second packet is a PES packet.

Claims 12-15 (**Canceled**)